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**HD Digital Receiver**

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# User's Manual

The default password is 0000.



**HUMAX**

# Notice

Thank you for purchasing a HUMAX product. Please read this user's manual carefully to be able to safely install, use and maintain the product at maximum performance. Keep this user's manual next to your product for future reference. The information in this user's manual is subject to change without notice.

## **Copyright (Copyright © 2010 HUMAX Corporation)**

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## **Warranty**

The warranty does not cover parts which may become defective due to misuse of the information contained in this manual.

## **Trademarks**

- Irdeto is a trademark of Irdeto Access B.V.
- Manufactured under license from Dolby Laboratories.  
Dolby and the double-D symbol are trademarks of Dolby Laboratories.
- HDMI, the HDMI Logo, and High-Definition Multimedia Interface are trademarks of registered trademarks of HDMI Licensing LLC.

# Notice

## Warnings, Cautions and Notes

Throughout the whole manual, pay special attention to the following marks that indicate hazardous situations.

- **Warning**  
Indicates a hazardous situation which could result in serious injury.
- **Caution**  
Indicates a situation which could damage the equipment or other apparatus.
- **Note**  
Indicates additional information to make the user aware of possible problems and information of any importance to help understand, use, and maintain the installation.

## Meaning of Symbols



To reduce the risk of electric shock, do not remove cover(or back). No user serviceable parts inside. Refer servicing to qualified service personnel.



This symbol indicates dangerous voltage inside the product that presents a risk of electric shock or personal injury.



This symbol indicates important instructions accompanying the product.

## Instruction about the 'WEEE' Symbol



This product should not be disposed with other household wastes at the end of its working life. Please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources. This will prevent possible harm to the environment or human health from uncontrolled waste disposal.

- **Domestic users:** Please contact either the retailer where you purchased this product or their local government office for details of where and how they can take this item for environmentally safe recycling.
- **Business users:** Contact your supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.

# Safety Warning

This product has been manufactured to comply with international safety standards. Please read the following safety precautions carefully.

## **Safety Instructions and Precautions**

### **1. MAINS SUPPLY**

90-250V a.c., 50/60Hz

- Operate this product only from the type of power supply indicated on the marking label. If you are not sure of the type of power supplied to your home, consult your local power company.
- Disconnect the product from the mains before you start any maintenance or installation procedures.

### **2. OVERLOADING**

- Do not overload a wall outlet, extension cord or adapter as this may result in electric fire or shock.

### **3. LIQUID**

- The product should not be exposed to liquid of any kind. In addition, no objects filled with liquid should be placed on the apparatus.

### **4. CLEANING**

- Disconnect the product from the wall outlet before cleaning.
- Use a light damp cloth (no solvents) to dust the product.

### **5. VENTILATION**

- The slots on top of the product must be left uncovered to allow proper airflow into the unit.
- Do not stand the product on soft furnishings or carpets.
- Do not stack electronic equipments on top of the product.

### **6. ATTACHMENTS**

- Do not use any unsupported attachments as these may be hazardous or cause damage to the product.

### **7. CONNECTION TO THE SATELLITE DISH LNB**

- Disconnect the product from the mains before connecting or disconnecting the cable from the satellite dish. Failure to do so can damage the LNB.

### **8. CONNECTION TO THE TV**

- Disconnect the product from the mains before connecting or disconnecting the cable from the TV. Failure to do so can damage the TV.

### **9. EARTHING**

- The LNB cable must be earthed to the system earth for the satellite dish.

# Safety Warning

## **10.LOCATION**

- Place the product indoors to avoid exposing it to lightning, rain or sun.
- Do not place it near a radiator or heat register.
- Make sure it has more than 10 cm clearance from any appliances susceptible to electromagnetic influences, such as a TV or a VCR.
- Do not block the openings with any object, and do not place the product on a bed, sofa, rug, or other similar surface.
- If you place the product on a rack or a bookcase, ensure that there is adequate ventilation and that you have followed the manufacturer's instructions for mounting.
- Do not place the product on an unstable cart, stand, tripod, bracket, or table where it can fall.
- A falling product can cause serious injury to a child or adult, and serious damage to the appliance.

## **11.LIGHTNING, STORM OR NOT IN USE**

- Unplug the product from the wall outlet and disconnect the antenna during a thunderstorm or when left unattended and unused for long periods of time. This will prevent damage to the unit due to lightning and power-surges.

## **12.EXTRANEOUS OBJECTS**

- Do not insert anything through the openings in the unit, where they can touch dangerous voltage points or damage parts.

## **13.REPLACEMENT OF PARTS**

- When replacement of parts is required, be sure the service technician uses replacement parts specified by the manufacturer or those that have the same characteristics as the original part. Unauthorized substitution may result in additional damage to the unit.

# Safety Warning

## **Warning**

The mains plug, as a disconnection device, shall remain readily accessible by the user.

1. **To avoid damage of the power cord or plug;**
  - Do not modify or process the power cord or plug arbitrarily.
  - Do not bend or twist the power cord.
  - Make sure to disconnect the power cord holding the plug.
  - Keep heating appliances as far as possible from the power cord in order to prevent the cover vinyl from melting.
  - The mains plug, as a disconnection device, shall remain readily accessible by the user.
2. **To avoid electrical shock;**
  - Do not open the main body.
  - Do not insert metal or inflammable objects inside the product.
  - Do not touch the power plug with wet hands.
  - Disconnect the power cord in case of lightning.
3. **To avoid damage of product;**
  - Do not use the product when it is out of order. If you continue to use the product when defective, serious damage can be caused to it. Make sure to contact your local product distributor if the product is out of order.
  - Do not insert metal or alien substance into the slots for the modules or Smartcards. It may cause damage to the product and reduce its life span.

# Contents

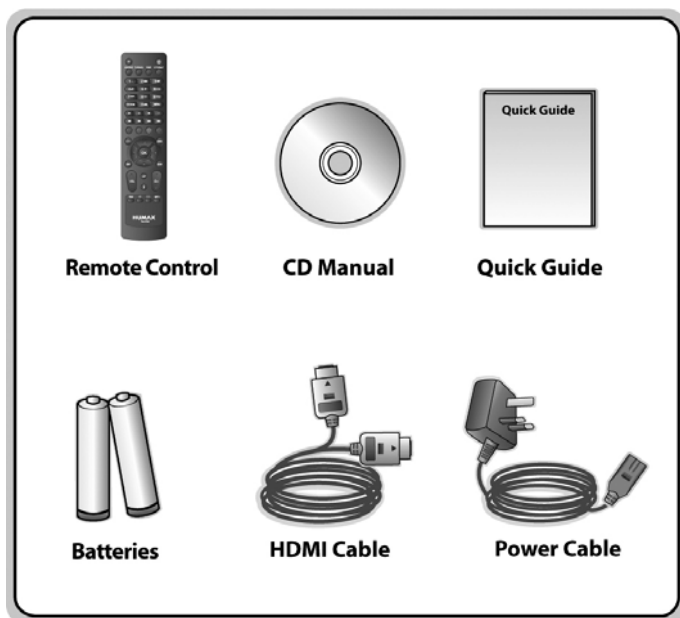
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# 1. Before Using the Product

This chapter provides detailed instructions on the product and its accessories.

## 1.1 Package Contents

Please check all package contents before using your product.



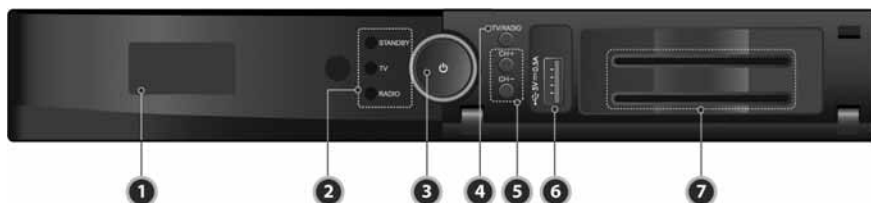
**Note:**

- Faults may occur if the remote control is left without battery for a long time. Always keep the battery inserted in the remote control.
- Package contents may vary according to area.

# 1. Before Using the Product

## 1.2 Front Panel

Open the right-hand flap on the front panel of the product to expose the card slot.



**1. STATUS DISPLAY**

The product status is displayed.

**2. STANDBY/TV/RADIO LED**

The light is emitted when the product is in each mode.

**3. STANDBY BUTTON**

Switches between operation and standby modes.

**4. TV/RADIO BUTTON**

Switches between TV and Radio modes.

**5. CH+/- BUTTONS**

Changes the channel.

**6. USB PORT**

Connect a USB storage device.

**7. SMARTCARD SLOTS**

Slots for Smartcard

**Note:** The image shown may differ from the actual product.

# 1. Before Using the Product

## 1.3 Conditional Access

Although some TV and radio services are free to air, others are available on a subscription basis and can only be enjoyed via a Conditional Access component.

### 1. Inserting the Smartcard

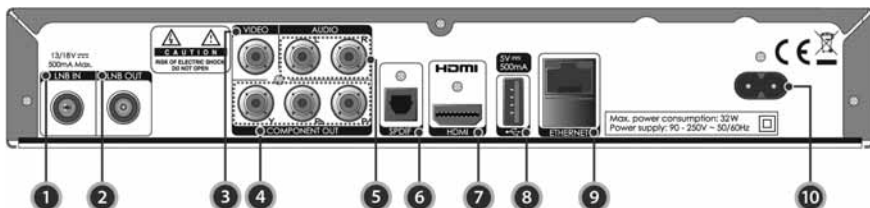
The Smartcard looks similar to a credit card and is inserted into the slot behind the right-hand front flap of the product. A valid Smartcard entitles you to view and listen to all the channels you choose to subscribe to.

1. Open the right-hand flap on the front panel of the product to expose the card slots.
2. Hold the Smartcard horizontally with the electronic chip (small square-shaped, gold in colour) facing downwards.
3. Insert the Smartcard into the slot.



# 1. Before Using the Product

## 1.4 Rear Panel



### 1. LNB IN

Connect a satellite antenna cable.

### 2. LNB OUT

Connect another digital satellite receiver.

### 3. VIDEO

Use an RCA cable to connect to the TV or VCR.

### 4. COMPONENT

Use a component cable to connect to the TV or VCR.

### 5. AUDIO

Use an RCA cable to connect to the TV or VCR.

### 6. SPDIF

Use an S/PDIF cable to connect to the audio system.(digital audio)

### 7. HDMI

Use an HDMI cable to connect to the TV.

### 8. USB Port

Connect a USB storage device.

### 9. Ethernet Port

Connect a LAN cable.

### 10. Power Cord

Connect to the power cord.

### Note:

- The image shown may differ from the actual product.
- You can find the product serial number on the bottom of the product.

# 1. Before Using the Product

## 1.5 Remote Control



### **MUTE**

Mutes audio.

### **STANDBY**

Switches between operation and standby modes.

### **SOURCE**

Currently not supported

### **TV/RADIO**

Switches between TV and radio modes.

### **WIDE**

Sets the display format.

### **V-FORMAT**

Sets the resolution of video.

### **NUMERIC**

(0-9)

### **TV Portal**

Currently not supported

### **MENU**

Displays the main menu.

### **Playback Control**

► Play, || Pause, ■ Stop, ● Record

◀◀ Rewind, ▶▶ Fast Forward, ◀◀ Previous, ▶▶ Next

### **COLOUR**

Colour keys for interactive applications.

**Note:** The image shown may differ from the actual product.

# 1. Before Using the Product



## **MEDIA**

Displays the media list.

## **GUIDE**

Displays the programme guide.

## **ARROW**

Moves the cursor up, down, left or right.

## **OK**

Selects a menu or confirms a selection.

## **EXIT**

Exits all On-Screen Display (OSD) screens.

## **BACK**

Returns to the previous channel.

## **VOL +/-**

Adjusts the audio volume.

## **LIST**

Displays the channel list.

## **i**

Displays the channel and programme information.

## **CH**

Changes the channel or page.

## **TEXT**

Enters the digital text service.

## **AUDIO**

Displays the audio list.

## **SUBTITLE**

Displays the subtitle language list.

## **OPT+**

Displays the channel's attributes.

## 2. Setup

This chapter describes how to connect your product to the TV with the particular equipments for gaining optimum signal quality. The product provides various interfaces to connect to the TV, VCR or other devices. Select the most appropriate procedure depending on the equipment you have.

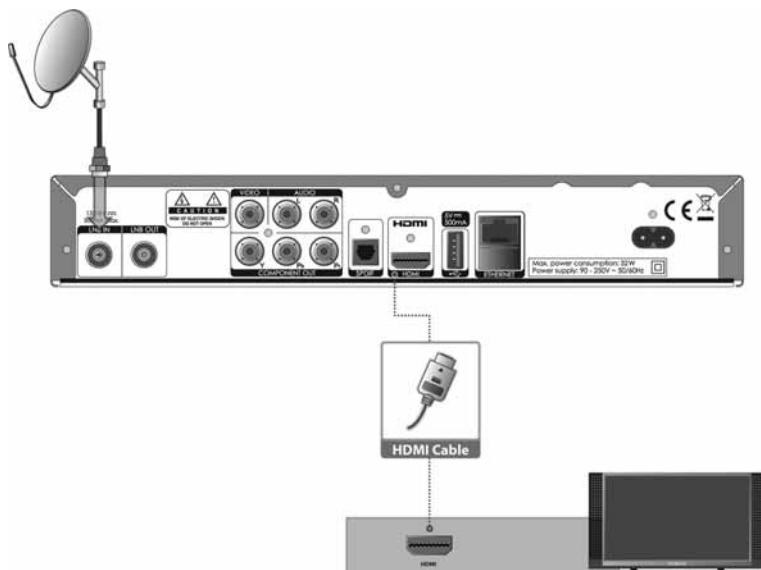
**Note:** If you encounter any problems setting up your product, please contact your local product distributor

### 2.1 Connecting the TV and VCR

You can select one of the following antenna connections depending on the equipment you have.

#### 1. Using HDMI Cable

The HDMI connection is recommended for Digital TV. In case the TV has a HDMI input connector, a special all-digital interface that provides the highest picture quality, connect the product and the TV using a HDMI cable as follows.



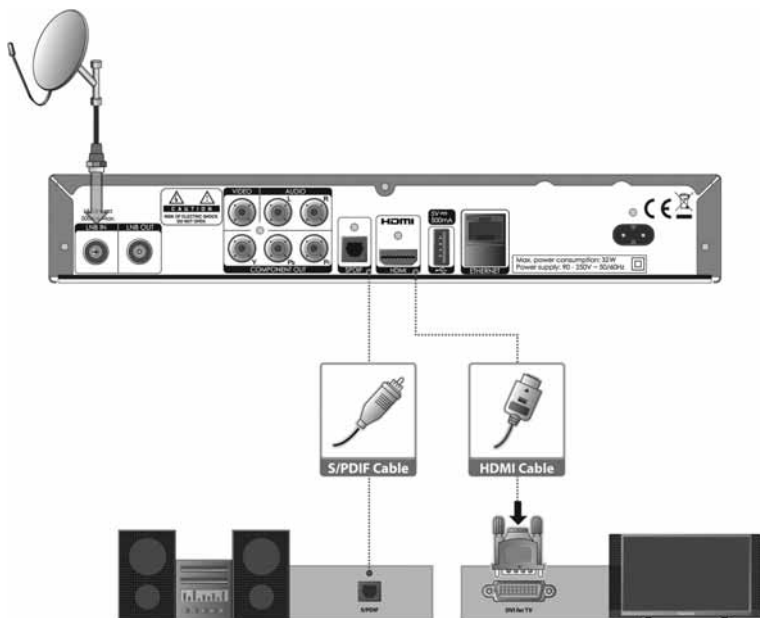
## 2. Setup

### 2. Using DVI Cable

The DVI connection using an HDMI to DVI converter is recommended for Digital TV. In case the TV has the DVI input connector only, connect the product to the TV with an HDMI cable using an HDMI to DVI converter as follows.

#### When equipped with an A/V receiver

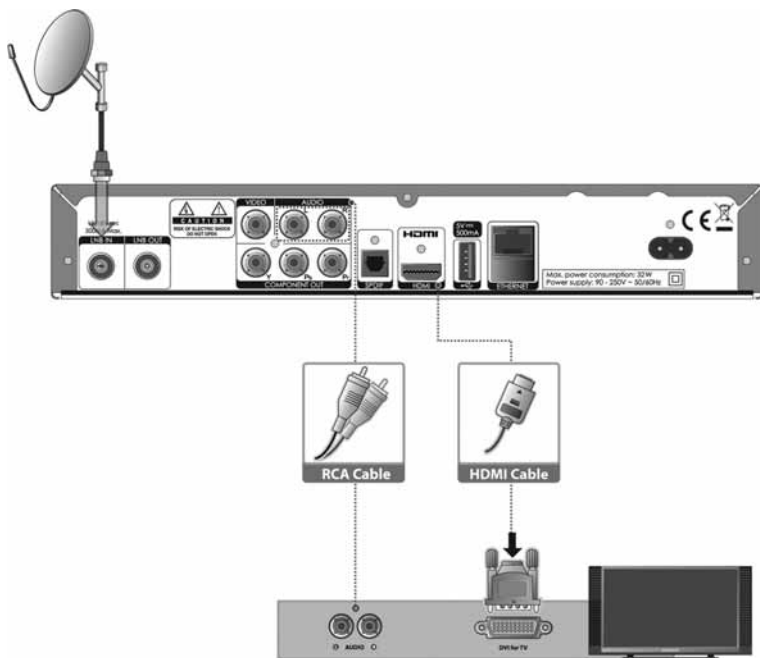
1. Connect one end of the HDMI cable to the HDMI input on the product and the other end to the HDMI to DVI converter.
2. Connect the DVI converter to the TV.
3. Connect the product and the audio receiver that functions as a Dolby Digital decoder using an S/PDIF cable.



## 2. Setup

### When there is no A/V receiver available

1. Connect the product and the TV using an RCA cable.
2. Connect one end of the HDMI cable to the HDMI input on the product and the other end to the HDMI to DVI converter.
3. Connect the DVI converter to the TV.



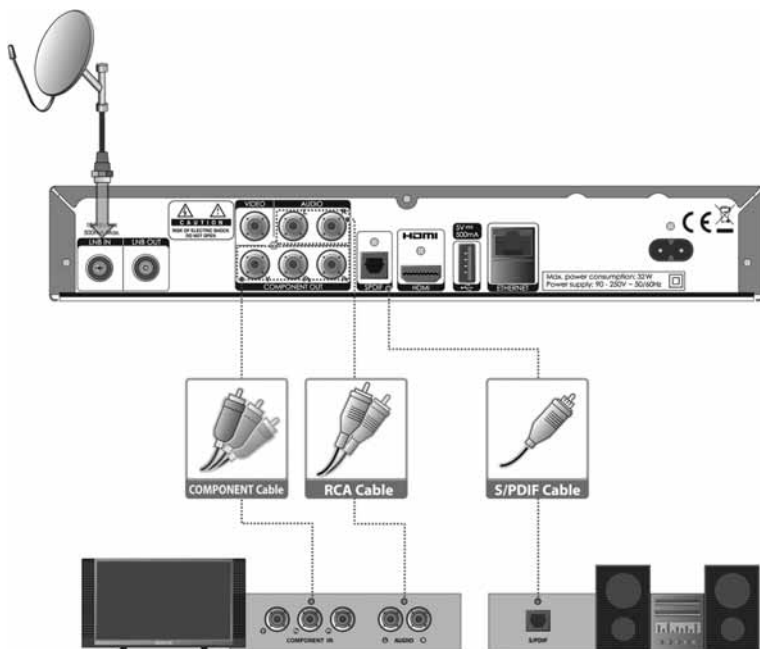
## 2. Setup

### 3. Using Component Cable

The component connection is recommended for Digital TV. Connect the product and the TV using a component cable as follows.

**You can either:**

- 1-1 Connect the product and the TV using an RCA cable (Audio L/R).
- 1-2 Connect the product and the audio receiver that functions as a Dolby Digital decoder using an S/PDIF cable.



## 2. Setup

### 2.2 Powering On

1. Connect the power cord of the product to a wall outlet.
2. Power on by pressing the **STANDBY** button of the remote control or the **STANDBY** button at the front of the product.



### Inserting Batteries

1. Press the hook upward and lift the battery cover off .
2. Insert the batteries matching the plus(+) and minus(-) at each end.
3. Close the cover.



## 3. Installation Wizard

When powering on your product for the first time after purchase, the installation wizard will operate automatically.

**Tip:** The default password is **0000**. If you have forgotten your password, please contact your local product distributor.

### 3.1 Language

Select your language.



### 3.2 Display

Set the video output to your TV.



### 3.3 Time Zone

Select your country to determine the time zone.



# 3. Installation Wizard

## 3.4 Search Channels

Select a type of channel search.

- **Automatic Search:** Search all channels of NILESAT(7.0W) and BADR(26.0E) and HOT BIRD(13.0E) automatically.
- **Skip:** If you have SCD or Motor antenna, skip the search process and go to installation in Settings.



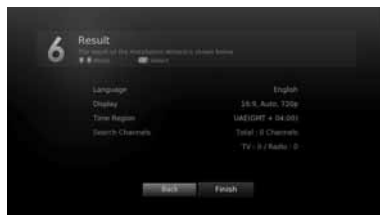
## 3.5 Automatic Search

Channel search will activate.



## 3.6 Results


The result of the installation wizard is shown. Select **Finish** to exit the wizard.



## 4. Basic Operation

This chapter describes the basic functions the product provides such as switching channel, volume control and other common features.

### 4.1 Switching Channel

You can switch the current channel by pressing the **CH**  button or entering the channel number directly using the **NUMERIC(0-9)** buttons.

### 4.2 Volume Control

Press the **VOL +/-** button to adjust the audio volume. Press the **MUTE** button to stop the audio temporarily.



### 4.3 Resolution

Press the **V-FORMAT** button while watching a programme. The current resolution will be displayed. Each time you press the **V-FORMAT** button, the resolution changes.

### 4.4 Wide

You can set the display format. Press the **WIDE** button while watching a programme to change the display format. Each time you press the **WIDE** button, the display format changes.

### 4.5 Audio

Press the **AUDIO** button and select the audio language you prefer. Select audio direction (left, right, stereo) using the   button.

### 4.6 Subtitle

Press the **SUBTITLE** button and select the required subtitle language and press the **OK** button. The subtitle will be displayed in the selected language at the bottom of the screen.

## 4. Basic Operation

### 4.7 Teletext

Press the **TEXT** button. To display the teletext menu, press the **MENU** button in teletext mode. Select the teletext function you want and press the **OK** button.

### 4.8 Programme Information (i-plate)

The i-plate is always displayed for a certain period of time whenever you switch channels. Press the **i** button while watching a programme. Press the **i** button again to view detailed information.



# 5. Channel List

The channel list will help you find the channel you want to watch quickly and easily.

You can access the channel list in several ways.

- Press the **LIST** button.
- Press the **MENU** button and select **Channel List**.

## 5.1 Changing Channels

Select the channel you want to watch and press the **OK** button.

Press the **►** button and select a channel group.

Press the **RED** button to sort the list in numerical or alphabetical order.

Press the **GREEN** button and select the channel type.



## 5.2 Editing Channels in Channel List

1. Select a channel you want to edit and press the **YELLOW** button.
2. Select an option.
  - **Favourite:** Select a favourite group you want to include the channel in and press the **OK** button.
  - **Lock:** Select **On** or **Off**.
  - **Delete:** Press the **OK** button.
  - **Rename:** Press the **OK** button and enter the name in the keyboard.
3. Select **OK** to save and exit.



# 6. TV Guide

The TV guide is an on-screen guide of grid type which displays the programme information of channels in time and date order.

You can access the TV guide in several ways.

- Press the **GUIDE** button.
- Press the **MENU** button and select **TV Guide**.

## 6.1 Table Guide

You can view the programme information of all channels in time and date order.

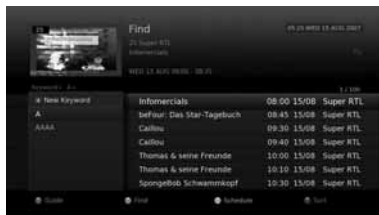
**Note:**

- You can set recordings only when the external hard disk is connected.
- Press the **BLUE** button to list the channel of other groups.



## 6.2 Find

**Find** will help you find the programmes more specifically using the keyword or genre.



## 6.3 Schedule

**Schedule** lists reminders or recordings and will help you manage them in more detail.



# 7. Recording and Playback

When you connect the external hard disk, you can record programmes and play back the recorded programmes.

**Note:** Certain hard disk drives may not be recognized or function properly.

## 7.1 Recording

### 1. Instant Recording

To instantly record the current programme you are watching, press the **RECORD** button.

Press the **RECORD** button again channel to change the recording duration.



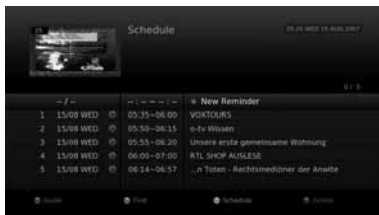
### 2. Scheduled Recording

❖ Select a future programme and press the **OK** button in **TV Guide**.

❖ Select **New Reminder** and press the **OK** button in **Schedule**.

❖ Press the **OK** button on a future programme in i-plate and select **Record**.

You can edit or delete your reservations in **Schedule**. To edit, select a reservation and press the **OK** button.



# 7. Recording and Playback

## 3. Recording Conflict

### Recording Duration Conflict

When an instant recording conflicts with one of the previously set recordings you can cancel one of the previously set recordings.

### Watching Conflict

When a scheduled recording starts on a different channel while you are watching a channel and recording another channel, a record notice will pop-up 30 seconds before the scheduled recording starts.

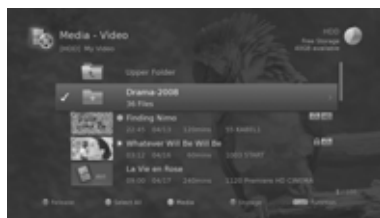
### Scheduling Conflict

When a new scheduled recording conflicts with one of the previously set recordings (or reminders), select a programme you want to keep.

## 7.2 Playback

### 1. Playing Recordings

1. Press the **MENU** button and select **Video**.
2. Select a file and press the **OK** button. Playback will start.

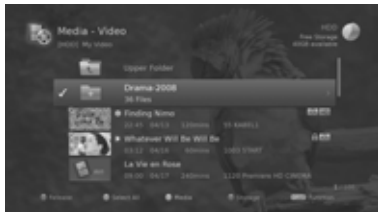


	Play
	Pause the scene. Press the <b>Play</b> button to go back to play mode.
	Stop the playback of the current file.
	Rewind
	Fast Forward
	Move to the previous chapter and replay the scenes.
	Move to the next chapter and skip scenes.
	Jump to the previous or next scene.

## 8. Media List

You can retrieve video, music or photo files from the USB storage devices.

1. Press the **MENU** button and select **Video**, **Music** or **Photo**.
2. Press the **YELLOW** button to switch the media type.



**Note:** Certain hard disk drives may not be recognized or function properly.

### 8.1 Playing Files

#### 1. Video

Select a file and press the **OK** or **PLAY** button.

To play multiple files successively, select the files using the **RED** button and press the **OK** or **PLAY** button.

#### 2. Music Player

Select a file and press the **OK** or **PLAY** button.

The music player is displayed while playing the music files.

#### 3. Photo Slide

Select a file and press the **OK** or **PLAY** button.

You can play music file during slideshow using the Slide Mode.

Press the **OPT+** button and select **Slide Mode**.

# 8. Media List

## 8.2 Editing Files

1. Press the **OPT+** button.
2. Select an option.
  - **Sort:** Press the **OK** button to sort the files in numerical or alphabetical order.
  - **Delete:** Press the **OK** button to delete the selected files
  - **Lock/Unlock:** Press the **OK** button and enter the password.
  - **Move:** Select the folder or storage you want to move the files to and press the **OK** button.
  - **Rename:** Press the **OK** button and enter the name in the keyboard.
  - **New Folder:** Press the **OK** button and enter the name of the folder in the keyboard.

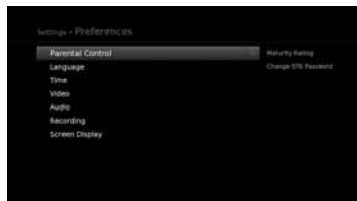
# 9. Settings

## 9.1 Preferences

In this chapter you can set options for parental control, language, time, video, audio, recording and screen display.

### 1. Parental Control

Maturity Rating, Change STB Password



### 2. Language

System Language, Audio Language, Subtitle Language

### 3. Time

Power On Timer, Channel, Volume, Repeat, Power Off Timer

### 4. Video

Screen Ratio, Display Format, Letter & Pillar Box Colour

### 5. Audio

Digital Audio Output, Lip-Sync

### 6. Recording

Start Padding Time, End Padding Time, Instant Replay Time, Skip Forward Time

### 7. Screen Display

Info Display Time, Transparency, Subtitle Font

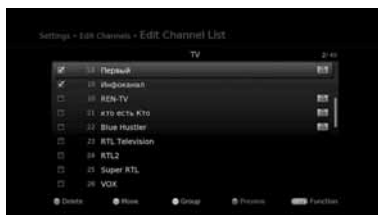
# 9. Settings

## 9.2 Edit Channels

In this chapter you can edit all channels in the channel list or make changes to the favourite lists of the channels you have chosen.

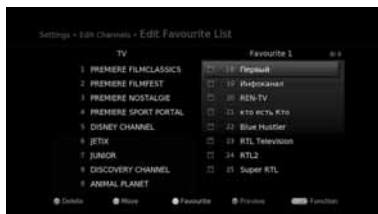
### 1. Edit Channel List

You can delete, move, lock or rename multiple channels.



### 2. Edit Favourite List

You can add or remove channels from the favourite groups.



### 3. Import/Export Channels

The channel data can be imported from the USB to the receiver or exported from the receiver to a USB device (such as USB memory stick). The file format of the channel data is .udf format.



# 9. Settings

## 9.3 Installation

**Installation** menu allows you to configure your antenna and search the available TV and radio channels. Software update and default setting are also available in this section.

### MENU -> Settings -> Installation

Press the **RED** button and select your antenna type.

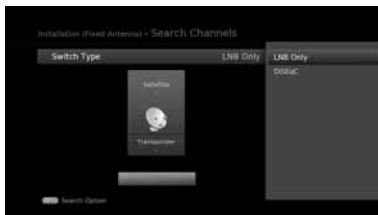
- **Fixed Antenna - SCD Antenna - Motor Antenna**



### 1. Search Channels (Fixed Antenna)

#### MENU -> Setting -> Installation -> Search Channels

1. Select **LNB Only** or **DiSEqC**.
2. Set the satellite by selecting a satellite figure and press the **OK** button.
  - **Satellite**: Select the satellite.
  - **LNB Frequency**: Select the LNB frequency.
  - **22kHz Tone**: Select **On** when using a 22kHz tone switch box.
  - **DiSEqC**: Select the DiSEqC switch.
  - **Test Transponder**: Check the signal status of each transponder and select the one with the best quality.
3. Set the transponder by selecting **Transponder**.



# 9. Settings

## 2. Search Channels (SCD Antenna)

### MENU -> Installation -> Search Channels

1. Select **SCD Setting**.
  - **Tuner1**: Select from Channel 1~8.
  - **Frequency**: The frequency is set based on the channel of tuner1.
2. Set the satellite by selecting a satellite figure and press the **OK** button.
  - **Satellite**: Select the satellite.
  - **LNB Frequency**: Select the LNB frequency
  - **Test Transponder**: Check the signal status of each transponder and select the one with the best quality.
3. Set the transponder by selecting **Transponder**.



# 9. Settings

## 3. Search Channels [Motor Antenna]

MENU -> Setting -> Installation -> Search Channels

1. **Motor Setting:** Set the type and location of your motor.
2. **Edit Satellite Data:** Select the satellites that the motor antenna is pointing to.
3. **Position Setting:** Set your antenna position for the selected satellites.
4. **Limit Setting:** Set the operation limit of your motor. 5. Select a satellite figure and select a satellite you want to search. 6. Set the transponder by selecting **Transponder**.
5. Select a satellite figure and select a satellite you want to search.
6. Set the transponder by selecting **Transponder**.



# 9. Settings

## 4. Software Update

In order to maintain proper performance of the product, it is essential to have the most up-to-date software. Visit the HUMAX website to check the latest news and newly released software versions. (<http://www.humaxdigital.com>) It is recommended that you periodically check for the availability of software update.

OTA, an abbreviation of **Over-the-Air**, means that the software can be downloaded through your aerial.

You can also search and download new software manually.

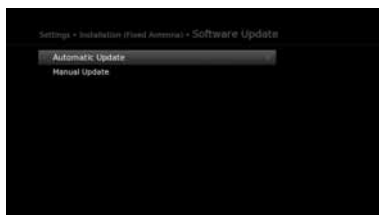
**MENU -> Setting -> nstallation -> Software Update**

### 1. Automatic Update

When new software is detected, select **Yes** to start the update process now.

### 2. Manual Update

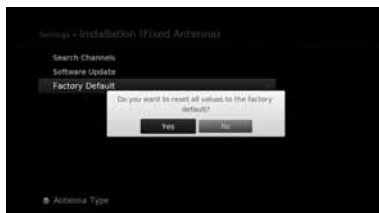
Enter the value for **Satellite**, **Frequency**, **Polarzation**, **Symbol Rate** and **FEC**.



## 5. Factory Default

**MENU -> Setting -> Installation -> Factory Default**

You can restore the product to the factory default.

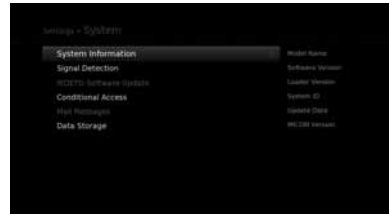


# 9. Settings

## 9.4 System

### 1. System Information

The system information is displayed.



### 2. Signal Detection

You can check the signal strength and quality of the searched channels.

### 3. IRDETO Software Update

When the Over-The-Air is available, **IRDETO Software Update** is activated.

### 4. Conditional Access

You can view the Smartcard information.

### 5. Mail Messages

You can receive mail sent by the broadcasting company.

### 6. Data Storage


You can check the size of the external USB storage devices.

# 10. Appendix

## 10.1 Specification

Tuner & Channel	
No of Tuners	1
Input Connector	F-Type, IEC 169-24, Female
Frequency Range	950 MHz to 2150 MHz
Signal Level	-25 to -65 dBm
LNB Power & Polarisation	Vertical : +13.5 V Horizontal : +18 V Current : Max. 500 mA (Overload protection)
22 KHz Tone	Frequency : $22 \pm 4$ KHz Amplitude : $0.7 \pm 0.2$ V
DiSEqC Control	Version 1.0, 1.2, USALS, Compatible
Demodulation	QPSK DVB-S: Compliant to EN300 421 DVB-S2: Compliant to EN302 307
Input Symbol Rate	DVB-S: 2 - 45 Ms/s DVB-S2: 10 - 30 Ms/s (QPSK)
FEC Mode	DVB-S: Auto, 1/2, 2/3, 3/4, 5/6, 7/8 DVB-S2: Auto, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10
MPEG Transport Stream A/V Decoding	
Transport Stream	MPEG-2 ISO/IEC 13818 MPEG-4 PART2
Profile Level	MPEG-2 MP@ML MPEG-4 AVC/H.264 HP@L4
Video Format	4:3, 16:9 Letter box
Video Resolution	576i, 576p, 720p, 1080i
Audio Decoding	MPEG/MusiCam Layer I, II & III
Audio Mode	Single/Dual Mono/Joint stereo/Stereo

# 10. Appendix

Memory	
Flash Memory	32 MB
RAM	256 MB
EEPROM	8 KB
Audio/Video/Data In/Out	
Video	RCA-Type(CVBS), YPbPr(RCA), HDMI/HDCP
Audio	Audio L/R, S/PDIF(Digital Audio Output)
Data Port	
USB	USB 2.0 Host (5 V  500 mA Max.)
Power Supply	
Input Voltage	AC 90-250 V a.c., 50/60 Hz
Type	SMPS
Power Consumption	Max. 32 W
Protection	Separate internal fuse. The input should be protected against lightning.
Physical Specification	
Size	280 mm × 45 mm × 200 mm
Weight (Net)	1.5 Kg
Operating Temp	0 °C to +45 °C
Storage Humidity	-10 °C to +70 °C

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When a “work that uses the Library” uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also combine or link a “work that uses the Library” with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer’s own use and reverse engineering for debugging such modifications.

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- a. Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable “work that uses the Library”, as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)
- b. Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user’s computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.

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- c. Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.
- d. If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.
- e. Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the “work that uses the Library” must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

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